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Official Report of Debates (Hansard)

P-11

Journal des débats (Hansard)

P-11

Standing Committee on Public Accounts

2016 Annual Report,
Auditor General:

Ministry of Transportation

Comité permanent des comptes publics

Rapport annuel 2016,
vérificatrice générale :

Ministère des Transports

2nd Session
41st Parliament

Wednesday 17 May 2017

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Mercredi 17 mai 2017

Chair: Ernie Hardeman
Clerk: Katch Koch

Président : Ernie Hardeman
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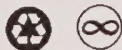
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LEGISLATIVE ASSEMBLY OF ONTARIO

ASSEMBLÉE LÉGISLATIVE DE L'ONTARIO

STANDING COMMITTEE ON
PUBLIC ACCOUNTSCOMITÉ PERMANENT DES
COMPTES PUBLICS

Wednesday 17 May 2017

Mercredi 17 mai 2017

The committee met at 1232 in room 151, following a closed session.

2016 ANNUAL REPORT,
AUDITOR GENERAL

MINISTRY OF TRANSPORTATION

Consideration of section 3.10, road infrastructure construction contract awarding and oversight.

The Chair (Mr. Ernie Hardeman): I call the meeting of the public accounts committee back to order. We're here this afternoon to hear delegations on section 3.10 of the 2016 Annual Report of the Office of the Auditor General of Ontario. We have here today a delegation from the Ministry of Transportation to speak to us.

With that, just to point out the rules of the game: You'll have 20 minutes to make a presentation about the auditor's report or anything else that may help us with our deliberations as we review the report. At the end of the 20 minutes, we will then have 20 minutes per caucus to ask questions and comments. We will start that round with the third party. At that point, we will then divide what time is left to take us to 2:45 in three, and then we'll make one more round at that time.

With that, again, thank you very much for being here. Before I go any further, if you would, as you speak, introduce yourself for Hansard to make sure we get it right. With that, the floor is yours.

Mr. Stephen Rhodes: Thank you very much. My name is Stephen Rhodes. It's my pleasure to be here today as the deputy of one of the oldest ministries in the province of Ontario, the Ministry of Transportation. I'm pleased to be joined here today at the table by Ms. Linda McAusland, the assistant deputy minister for the provincial highways management division, and Mr. Kevin Bentley, the executive director in that same division and the chief engineer. As well, I want to acknowledge the presence of Mr. Gerry Chaput, the interim chief capital officer at Metrolinx and the former assistant deputy minister of the provincial highways management division.

Before I begin, I want to start by thanking the Auditor General and her team for their recommendations that will certainly help further strengthen the procurement and oversight of the ministry's construction contracts. We certainly appreciate that. The ministry has a strong

tradition of innovation and constant improvement, and we welcome the team's recommendations.

The Ministry of Transportation has helped Ontario be a world leader in moving people and goods safely, efficiently and sustainably. Our strong road safety record speaks for itself. We continue to be ranked among the safest jurisdictions in North America when it comes to road safety. The Auditor General's recommendations can only help us improve and build upon our management of one of the largest transportation systems in North America.

I look forward to sharing with you today the details of how we took decisive and immediate action and responded to the auditor's report by creating and implementing a 50-point action plan, including such things as taking control and oversight of delivery of asphalt samples for testing, further strengthening our series of asphalt-cement tests to ensure the quality and longevity of asphalt, and strengthening the collection of penalties and interest when contractors don't meet our high standards. We've also ended the industry practice of incentivizing contractors for their work, except in instances where the contractors go above and beyond to ensure payment exceeds those high standards. I'll be talking a little bit more about that a little later.

I would like to provide you with just a brief overview of the ministry, the work of our highway management division and our system of procuring highway engineering, construction and maintenance contracts. I will then provide an update on the significant progress we've made in implementing our 50-point action plan.

Our priority is to support one integrated transportation network system across the province. To achieve this vision, we continue to increase transit infrastructure, promote road safety and oversee Ontario's highways and bridges.

The ministry's provincial highways management division is responsible for expanding and rehabilitating the province's highways and bridges. Every decision they make considers both road safety and road quality, while ensuring good value for Ontario taxpayers. As the stewards of our highway network, the ministry oversees approximately 17,000 kilometres of provincial highways and 2,800 bridges in Ontario. This requires knowledge and tireless dedication. That is why Ontario enjoys one of the safest and strongest road networks in North America.

To construct and maintain a highway network of this quality and scale, the ministry works extensively with industry stakeholders. Between 2012 and 2016, we issued more than 1,700 public contracts, ranging from repaving roadways to building new bridges and highways.

Over the past five years, the ministry constructed 58 new bridges and added more than 689 kilometres of new highway lanes across the province. This includes major projects and improvements to Highways 401, 410 and 427 in the GTA. This also includes a whole host of medium- and smaller-sized projects that are no less important and that are critical to the Ontario highway network that we have.

When it comes to procuring contracts for highway engineering, construction and maintenance, the ministry has a robust system of checks and balances in place to ensure that the process remains fair, open and competitive. To ensure the integrity of our transportation system, the ministry monitors market conditions and tracks historical prices for various components of major capital highway construction projects.

For construction projects valued at over \$3 million, we always ensure there's an independent estimate that is prepared prior to the tender closing. For routine contracts under \$3 million, a cost estimate is prepared on historical pricing for similar work undertaken in the past. Contractor bids are then compared to the ministry estimate and analyzed for value.

To make sure all tenders receive competitive bids, we monitor the construction industry to make sure that a reasonable number of tenders are scheduled to be advertised at the same time. This ensures that the industry is not overwhelmed with more open contracts than the contractors available. All construction contract opportunities are advertised publicly for a minimum of 30 calendar days. Open tenders are listed on the ministry's electronic contract bulletin board and in the industry's daily commercial news.

To ensure that the ministry only considers bids from contractors capable of completing the work, the ministry has a prequalification process for all major construction contracts. This is typical for contracts of \$1 million or more. For smaller contracts typically less than \$1 million, contractors may prequalify or provide a bond or a letter of credit demonstrating financial security.

Thanks to the robust and independent procurement processes in place, Ontarians can be assured that, should we suspect any inappropriate bidding—this would be, obviously, a very rare circumstance—we would immediately refer the matter to our internal audit team for investigation. They would determine whether to refer the matter to any other appropriate authorities.

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After contracts are awarded, the ministry's work continues with a vigorous oversight of contractors' work. All contractors are required to meet our high standards and to construct safe, durable and long-lasting infrastructure. There are numerous tools at our disposal to make sure that this happens. These include price adjustments,

warranties, contractor performance ratings, and provisions for the removal and replacement of work and materials of questionable quality.

Whenever we have a concern with the work performed, we respond quickly to ensure that the roads in the province are safe and of high quality. An important part of this oversight is the use of contract administrators to ensure that projects are constructed according to contract requirements and all applicable codes, standards, specifications and directives. When taken together, these steps contribute to ensuring that all drivers enjoy a safe and reliable journey.

Since the release of the Auditor General's report, we have taken decisive action on her recommendations, and that of her team, and further strengthened our system of oversight and procurement. We recognize the need to be ever vigilant with respect to the quality of our asphalt pavements and how we oversee the contractors' work.

I would now like to outline a few of the specific measures taken to strengthen the value of our work at the Ministry of Transportation. The Auditor General provided us with seven specific recommendations. These fall into four major categories or themes. The first one is asphalt quality and testing, with the second one is working with industry partners. The third one would be construction safety and inspections, and the fourth one would be contractor oversight.

In relation to the first category, asphalt quality and testing: Quality, long-lasting pavement is always in the best interests of everyone who travels on Ontario roads and bridges. Since 2009, the ministry has been conducting internal and external research and work with university experts to develop new tests for predicting and preventing premature asphalt cracking. As a result of this work, several tests have been incorporated into our system for testing asphalt cement quality.

I apologize; the next part sounds a little technical. Sorry. But I'm just going to give you a bit of a sense of some of the tests that are currently conducted. There is the ash content test, which determines the amount of recycled engine oil that may be added to asphalt cement. The enhanced tension/double-edge-notched tension test—that's a tongue twister—measures the asphalt cement's ability to stretch and resist cracking. The multiple stress creep recovery test measures a section of pavement's ability to avoid rutting during the hottest days of the summer, and the extended aging test, which is also called the extended bending beam rheometer or ExBBR test, predicts when a section of pavement will start cracking in cold temperatures. Some of those are tongue twisters.

I'm proud to say that the development of these tests has placed us at the forefront of tackling the issue of premature asphalt cracking. To maintain high standards for materials that contractors use to construct highways, including asphalt, the ministry relies on the end result specification, or ERS system, developed and implemented in the 1990s. This system is seen as an industry standard across North America. Because the materials

that go into highway construction are made of natural components, their quality and characteristic can vary throughout the province. As such, the ERS system helps us to establish the set of acceptable ranges for the quality of materials used on our projects.

Within these acceptable ranges for materials, the ministry follows industry standards of adjusting the price it pays to contractors. When contractors use high-quality materials, the ministry adjusts the price upwards. When a contractor uses lower-quality materials, the ministry adjusts the price downwards. Lower-quality materials outside the acceptable range are rejected outright. We will not be compromising on quality and safety for the purpose of money.

We apply a similar system to the quality of our contractors' work overall. For contractors whose workmanship and materials exceed expectations, we follow the industry standard of incenting them. These incentives are beneficial to everyone because they prompt contractors to go above and beyond our high standards and use only the best materials. This is in the best interests of everyone because these pavements last longer.

To help us further strengthen our system for testing asphalt quality and to guarantee that we only pay for the highest-quality materials and pavements, the Auditor General recommended that we do the following three things: change how we pay for asphalt materials through the end result specification system; use the extended aging, or extended bending beam rheometer test, in evaluating the durability of asphalt pavements; and review the controls and processes in place for the oversight and delivery of asphalt sample tests.

We agree with these recommendations and are taking action on several fronts. Following the Auditor General's recommendations, we have suspended most asphalt incentive payments. I say "most" because we continue to provide an incentive for contractors who go above and beyond and make extra efforts to provide a high-quality paved surface that exceeds standards on smoothness. That is done because it extends the life of the pavement, assists with greenhouse gas emissions and enhances the overall driver experience. But the vast majority of other incentives have been removed.

I want to add that we have retained strong penalties for contractors who use materials of inferior quality, or when the quality of work is lacking.

Other changes we've made included suspending the use of reclaimed asphalt pavement and roof shingles in the top layer of asphalt pavement. Using these materials on roads projects is environmentally friendly and an accepted practice across the industry. However, we are limiting their use in the top layer until we better understand their potential impact on premature cracking for asphalt. We will continue to use these materials in underlying pavement layers as they are not exposed to the elements and the constant wear and tear that a top layer is exposed to.

We have also further restricted the use of recycled engine oil in asphalt mixes, as measured by the results of the ash content test, which I referred to a little bit earlier.

As well, starting this past April, we modified the end-user result specification system by establishing higher benchmarks for pavement smoothness. We also raised the requirement and removed incentives for pavement compaction. Better compaction enhances the lifespan and durability of the pavement by improving the pavement's resistance to cracking and potholes, which could be hazardous for motorists.

To ensure that the ERS system, which I referred to previously, is consistently applied, we have updated and delivered training for the staff who are administering that system. By the end of 2018, we will complete our in-depth review of the ERS system and continue to look for ways to further enhance our asphalt requirements in pavements and further improve pavement quality.

Because testing is at the centre of how our ERS system works, we have also acted on the auditor's recommendation to implement the extended aging test—I'm not going to go through the full acronym, as fun as that is—which predicts when a section of pavement will start cracking at cold temperatures in our testing regime. That new test has been in place in all contracts tendered as of March 1, 2017. Because this test can accurately determine how well pavement can resist cracking in Ontario's harsh climate, we expect to start seeing better performance in our asphalt pavements in the future.

The ministry has also tightened up how we collect and deliver asphalt samples by assuming responsibility for the care, control and oversight of all contractor samples on a go-forward basis. The products being tested remain in our custody from the time they are selected until they are tested. This practice is now being applied to all new contracts and a number of existing contracts where previously the contractor was responsible.

Finally, we have established a dedicated phone line for reporting any suspected fraud or any other violations or inappropriate activities related to MTO construction contracts. It is available to everyone involved in the construction and oversight process of our highway projects. All information will be independently reviewed and referred to our corporate audit team and any other authorities as appropriate.

The second category of recommendations that I mentioned earlier was working with industry stakeholders. The success of the highway network depends on maintaining a good working relationship with the industry. The Auditor General would like us to ensure that these relationships are taking place with the best interests of Ontarians in mind. We fully agree and are continuing to develop and enforce our policies that reflect best practices. To make sure that all dialogue and consultation with stakeholders remains open and transparent, we are establishing an expert panel to provide independent advice regarding administrative best practices and contract revisions.

When disagreements do arise occasionally between the ministry and its contractors, we have a clearly defined and objective dispute resolution process currently in place. We will monitor and review this process to iden-

tify opportunities for further improvements. This will help us ensure that differences of opinion continue to be resolved as swiftly and as fairly as possible.

In her report, the Auditor General asked us to evaluate industry best practices on the collection of liquidated damages. These are included in all our contracts to help ensure that projects are delivered on time. The contract defines the amount of money that the ministry will collect in the unfortunate event that a project is delivered late. It is based on the estimated cost of administering the contract.

We continue to collect liquidated damages in accordance with the contract provisions. For recent contracts, this means that liquidated damages are collected after the contract's dispute resolution process is complete. In addition to continuing to enforce this policy, we will be instituting interest charges on liquidated damages for all new contracts on a go-forward basis.

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By the end of this year, we will complete a review of how we develop our policies, standards and specifications related to our construction contracts with appropriate input from stakeholders. We're committed to seeing our contracts completed on time and on budget, while providing fair compensation to all our contractors, consultants and suppliers and ensuring good value for the people of Ontario.

The third category for the recommendations was entitled "construction safety and inspections." That was the theme that we placed it under. This is the third area.

The overall success of our system for overseeing the safety of our infrastructure is demonstrated every day as our highways successfully meet the travelling needs of millions of Ontarians and thousands of businesses to reach their destinations in a timely fashion. We are considered a leader in road safety in no small part because we will not sacrifice safety and quality. At the same time, we recognize that there is always room to improve how we do things, especially when it comes to ensuring the safety of our staff, contractors and the travelling public.

Currently, a robust system of supervision is in place to ensure that highways and bridges are safe. Our practice has been to use both consulting engineer firms and in-house staff to provide our primary level of construction oversight. We also have what are referred to as quality verification engineers, or QVEs for short, to oversee and validate critical components. A critical component overseen by a QVE, for example, could be reviewing reinforcement steel and the form work for a concrete barrier on a bridge. Reinforcing steel, or rebar, is a mesh of steel bars designed to reinforce and strengthen the concrete structure. Form work is basically the mould that holds freshly poured white concrete in place. QVEs ensure that the correct rebar was used and placed properly in the form work and make sure that it is assembled properly before concrete is poured. To date, since the auditor's report, we've reviewed our specifications of the following components analyzed by quality verification engineers. Those components include structural excavation, reinforcing steel and some electrical items.

We've identified contracts where we will conduct our own review, rather than use QVEs. We're also undertaking a pilot project involving at least 15 contracts across the province where MTO staff will carry out the QVE certification process as the construction season proceeds. We will also conduct random audits of key projects to ensure that QVE work is meeting our requirements. Before the end of 2018, we will finalize our review of the QVE process and implement any further changes that we feel are necessary to achieve independence in the process and ensure the quality and safety of our infrastructure.

The final category was related to some of the recommendations related to contractor oversight.

Receiving the safest and highest-quality infrastructure at the fairest price, overseeing contractors' work and enforcing contract provisions is obviously extremely important to the ministry. The Auditor General recommended how we handle contractors with poor performance records and how we enforce warranty provisions. The ministry strongly believes that contractors who do not follow the safety standards and other serious provisions should be dealt with appropriately. We also agree that the contractor whose work is covered under warranty should pay for any and all work that fails prematurely. We're strengthening our contract warranties by clarifying contractor requirements and promoting the use of automated and objective data when evaluating pavements. This will reduce areas open to subjective interpretation, which will reduce the number of disputes and improve the efficiency of the dispute resolution process.

We're also strengthening and standardizing our system for administering warranty provisions. Before the end of 2017—this year—we expect to develop and implement a new province-wide tracking system for administering and enforcing warranty provisions. By 2018, we will launch an automated data-collection system. We will also publish a pavement-warranty guideline for our staff to use across the province. Going forward, we will perform a complete review of the warranty provisions we currently have in place and consider any other types of warranty provisions that may be appropriate.

With regard to how we deal with poorly performing contractors, we are reviewing our current qualification process and considering instituting new safeguards and sanctions. This will include changes to our current contractor performance rating system to ensure contractors have the financial capacity to meet our high standards for safety and quality when constructing projects.

As of April 1 of this year, 2017, the ministry has introduced new financial security requirements for all small contractors. These contracts now require a performance bond and a labour- and material-payment bond. A further review is under way and will be completed in 2017 and could include such things as confirming contractors' financial information with other agencies or municipalities, a third-party credit monitoring tool that provides financial payment information, as well as increasing contractor education of MTO's financial reporting requirements.

The Chair (Mr. Ernie Hardeman): I hate to interrupt you there. We hope the rest of your presentation will fit in the first question.

Mr. Stephen Rhodes: It was in closing. No problem.

The Chair (Mr. Ernie Hardeman): Thank you very much for the presentation. We'll now start with the first round of questioning. Mr. Hatfield.

Mr. Percy Hatfield: Thank you for coming in. I'm new to this file, so I may be off base on some of it. I was blown away when I heard earlier today about the sample switching, the whistle-blower. You guys didn't do anything about it after the OPP said, "Yes, there's a case here." Why didn't you lay charges and take this further?

Mr. Stephen Rhodes: Certainly we take those matters very seriously, and those matters are reviewed very carefully. In my opening piece I mentioned that on a go-forward basis we will have a dedicated phone line in place to flag any issues that arise. We also will ensure that they are investigated to the fullest extent, and—

Mr. Percy Hatfield: Yes, but why didn't you do it then?

Mr. Stephen Rhodes: I started in the ministry in February 2016. It predates me a little bit, so I might ask Kevin Bentley, who is here with me. He can maybe give a little bit more context from that particular period of time.

Mr. Kevin Bentley: Certainly, as was mentioned, we did refer the matter to our internal audit team. They provided some recommendations. We did have a discussion with the Ontario Provincial Police, and following that discussion there was a decision made that instead of focusing on that particular event in terms of the circumstances that were presented, the thought was to focus on basically improving the security of our samples.

Mr. Percy Hatfield: I think of Olympic athletes. I guess they could go out and do the same thing again if they weren't held up on it.

The other thing that blew me away was the bonusing. You let out a contract on a regular basis. There are specifications. The job is completed to those specs and you still give bonuses on top of the job. If I hire a painter to paint my house and he does it on time and on budget, then why do I give him a bonus?

Mr. Stephen Rhodes: I'll start with answering; Kevin may fill in some components. Certainly it's an industry best practice to do that. You probably heard in my opening comments that some of the incentive structures that were there before to do with materials or compaction have now been discontinued. The one incentive structure we are keeping is related to a smoothness indication, because our view is that the research indicates that it shows it's going to have a longer life as a result, and improvements to the greenhouse gas components and things of that nature.

Certainly those incentives also come along with countervailing penalties along the way—

Mr. Percy Hatfield: Yes, but as I understand it, if you give somebody a bonus for completing the work, and then you find out that the work was insufficient and you

have to go back and make good on it, you don't take the bonus back. You let them keep the bonus for screwing up the job. I don't get that.

Mr. Stephen Rhodes: Kevin can maybe give you a little bit more of the inside workings of how that works.

Mr. Kevin Bentley: As the deputy mentioned in his opening remarks, we use an end-result specifications system. That involves establishing acceptable ranges and unacceptable ranges. Within the acceptable range, the payment can vary depending on whether it was at the bottom of the acceptable range or towards the very top of the range. Once it's below the bottom of the acceptable range, then it becomes what we call rejectable, and that material isn't accepted. There is no payment for that material. In fact, it has to be removed and replaced.

Within that range, as the deputy referred to, we are dealing with natural materials—different aggregates, different asphalt cements—and we're also looking at producing those materials. As an example, asphalt, as the Auditor General outlined in her report, is basically a combination of stone, sand and asphalt cement, which is the material, the binder, that holds the mix together. You're not blending them in a lab in a controlled environment; you're creating them in large quantities, thousands of tonnes, in a hot-mix plant. There can be variability in production. There can be variability in the materials.

There are also other things to consider, such as the transportation of the material to the site in terms of hauling it in large trucks, placing it into a hot-mix paver and placing it on the road. All of those things can lead to variability in terms of the actual asphalt pavement that's laid on the road.

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Mr. Percy Hatfield: I get that. I guess I just don't get that you give someone bonus money, then you find out, "Hey, it wasn't what we paid for or gave the bonus for," but you leave the bonus money there.

That aside, the QVEs: Have you considered having a stable of independent verification engineers and stopping allowing the contractor to hire his buddy to sign off on something that later you find out wasn't as good as that person said it was, so that you have a better-quality verification process?

Mr. Stephen Rhodes: That's certainly something that we will be considering. When I chatted at the front end there, we certainly talked about reviewing a range of the QVE things, bringing some of that stuff in-house. We also plan to do a complete review of how we use them in 2018, so that is certainly something we will be considering.

Mr. Percy Hatfield: I just want to compliment you for the work that you do on behalf of the taxpayers. I mean, our roads are safe and you guys are responsible. You make it happen; right? And you're doing the best you can with what you have to work with. I don't know that you get told that enough, that our lives are in your hands when you do these contracts and keep our roads safe.

As I say, I'm new to the file, but some of the things I heard this morning were just—wow, how could this have happened? I understand there are contractors that will litigate for various reasons and you're more apt to settle as opposed to keep fighting it because the expense is going to be less. Have you ever given thought to if a contractor has got outstanding litigation above a certain amount, then that person can't bid on any more contracts until that litigation is resolved? Why keep bringing people in, letting them sue you and giving them another contract? I don't get that.

Mr. Stephen Rhodes: Sure. It's certainly a good point and it's something that we will consider. In our business, it's always trying to ensure that we have a number of bidders to ensure that we have a competitive price at the end of the day. I did mention in the opening comments that we do plan to put a review panel together over the course of this year that will give us some independent advice on some of the contract provisions that we should be considering changing and modifying. This is certainly one of the things that we will be speaking to them about and seeking their advice on.

Mr. Percy Hatfield: And I guess it's the same if someone gives you bad or fraudulent financial information and you find out about it, but I understand there's not much of a penalty for them doing that, right? Or there hasn't been in the past?

Mr. Stephen Rhodes: Kevin can probably give you a little more of the ins and outs of how we go through the qualification process for the contractors, and financial is a fairly significant component of it. I'll let Kevin just give you a little bit more information on that front.

Mr. Kevin Bentley: As the deputy mentioned in his opening remarks, we have what we call a pre-qualification system in place for all of our contracts that are over \$1 million. That involves, on an annual basis, the contractor supplying all of their financial records for our review, all their audited statements, which we go through to basically look at their financial capacity to complete the work.

We also look at their management structure, resources, equipment and so forth to make sure, as well, that they have the resources available to complete the work. That's on an annual basis.

We also complete over 25 random audits every year of those financial statements by going to that contractor's office and reviewing their statements. That's on an annual basis.

Then, as well, prior to submitting a bid on any particular contract, in the weeks leading up to that contract, the contractor again has to submit what we call a tender registration form, again updating all their financial information and their work on hand to make sure they still have remaining capacity to do the work. We also review it on a project-by-project basis prior to each tender. It is a very robust qualification system, both from a financial and a resource capability perspective.

Then we also have what we call the qualification committee. In that, we look at things that you mentioned:

inappropriate behaviour, or potentially supplying inappropriate financial information. Contractors in that process can be subject to what we call bid sanctions, which restrict the amount of bids, which basically reduces their bid rating. Those sanctions have been placed on contractors for inappropriate activity.

Mr. Percy Hatfield: How are we doing on time, Chair?

The Chair (Mr. Ernie Hardeman): You have about nine minutes left.

Mr. Percy Hatfield: Oh, okay; I have lots of time. I didn't realize. I'm trying to rush through everything here.

One thing that stood out for me, I guess, or one of the many things that stood out for me was the collaboration between you and the industry partners. I understand you have to have that; no doubt about it. But it seems to me, from my first read of this, that they have a great deal of influence on ministry decisions.

For example, when the new tests were developed, my understanding is that industry convinced you to wait something like five years before you started testing. To me, that's allowing industry to keep doing what they've been doing on bad asphalt for five more years before the tests were implemented. I may have it wrong, but that's my read of it.

If that was the case, can we be assured that that is no longer the case, that it won't happen again, and that if you develop new policies, new testing, they are implemented as soon as possible and industry can't convince you to back off on any of that?

Mr. Stephen Rhodes: I'm going to refer to Kevin, but I will give some introductory pieces on this.

On a go-forward basis, those new tests that we referred to—I won't go through the long title again, because it's a tongue-twister—have been put in place. In 2011 there was a wide range of tests that were put in place. Kevin can maybe give you a little bit of further information about the additional work that we did between 2011 and currently to assure ourselves that the tests that we were contemplating actually met our needs. But certainly we take that very seriously and, on a go-forward basis, the regime of tests we have will continue to be in place, and we will continue to try to expand and look for other best practices North-America-wide, if there are any other ones that we should be considering.

With that, I'll let Kevin give you a little bit more information about the period of time prior to me arriving.

Mr. Kevin Bentley: The deputy mentioned the litany of asphalt-cement tests that we now have in place and that are in place for all new contracts going forward in 2017. That included the test that was recommended by the Auditor General, which we had in place in some contracts last year—not all contracts.

I guess, going back, certainly this issue of—it's not all cracking. I mean, pavements crack. Pavements crack for various reasons. It can be the underlying soil conditions; it can be the underlying amount of granular; it can be for lack of drainage. There are lots of reasons why a pavement can crack. Pavements generally crack as well

because of the oxidation, the aging of that pavement. So really, it's focusing on what the Auditor General termed "premature" cracking. We would go one step further to say that now we recognize it as premature cracking related to our colder climate, our colder temperature, and changes that were happening in that asphalt cement, that liquid asphalt cement, and things that were basically being done.

Going back to the late 1990s, we have a series of different grades of asphalt cement that we use, where we set a low temperature and a high temperature. Depending on where you are in Ontario, we use different grades of asphalt cement. But starting in 2000, and going back to 2004, we started recognizing that we were having these issues of relatively new pavements that were cracking, as the Auditor General termed it, prematurely.

We certainly did a jurisdictional reach-out. We talked to other provinces in similar climates. We talked to northern states in the United States. No one else had any experience with this premature cracking. In a way, we were on our own. We had to start from scratch. That's why we had to develop different tests than other people were using.

Certainly, industry referred to the other tests that were being done across North America. However, that one test was primarily related to more the higher-temperature range where you get rutting, as the deputy referred to, at higher temperatures. So we were looking more at developing good tests that would predict performance at lower temperatures. That's when we got into the use of these new tests that we developed with the help of a professor at Queen's University, and certainly industry was concerned about whether these tests would actually predict cold-temperature cracking.

So, after doing that jurisdictional review and developing the new tests—and even after we developed the new tests, as you can appreciate, there's a whole series of other things that you have to do before you can implement them across the province. So we had the tests. The next thing you have to develop is all of the testing procedures. Again, our testing is done by a series of independent labs across the province. You have to have these testing procedures in place so that everybody is replicating the test and getting the same results, so that everybody can agree that those test results are representative of that new test.

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There is also time that isn't accounted for in the chronology around developing these testing procedures, in doing trials. That would allow us, again, to replicate the results. Then we also had to go around all the labs across Ontario and calibrate, to make sure that that lab was able to produce the same results, by giving them samples for them to test, and then comparing labs to labs. So we had to do a whole calibration of the labs as well.

Certainly, there's no doubt the industry was concerned about the introduction of these new tests. However, there were a lot of other things that we had to do logistically, to make sure we were confident that those test results could

be produced reliably across the province and also would be a good predictor of cold-climate cracking.

Mr. Percy Hatfield: When you were monitoring those results across the province, was there anything different from, say, the three-year mark to the five-year mark? Could you have implemented at year three instead of year five, or were you still getting different results and you had to finesse things for the next two years?

Mr. Kevin Bentley: The tests were implemented in stages. The ash content test was introduced earlier; the extended tension test was introduced earlier. It was the extended aging test, which was in the Auditor General's recommendation, which wasn't really introduced on all contracts until this year, and was just done on some contracts in 2015 and 2016.

So it was a staged approach. Not all tests were implemented at the same time.

Mr. Percy Hatfield: On the challenges to the quality: Has it been the case that the ministry has had to provide the burden of proof that this was bad quality, or was it the contractor? Who had the responsibility previously, on the warranty provisions, to provide the burden of proof, either one way or the other?

Mr. Kevin Bentley: Most of our contracts have what we call a one-year general warranty, where we provide the design, and the contractor does the construction, and then we have a one-year general warranty that would cover any general defects that occur within that first year. It really only covers the first year in terms of workmanship and materials and so forth, so it's a one-year general warranty. The warranties that the Auditor General was referring to in her report are what we call our seven-year payment warranty projects.

Even in our one-year general warranty, as you could appreciate, we were concerned that things were happening after that first year. We wanted to look at a longer-term warranty and put more of the onus on the contractor, making them responsible for the design of the pavement, for providing to us a design of that pavement and taking on responsibility for the design, and for the construction, the materials and everything. Having one party responsible for all aspects, we felt that we could put in a longer-term warranty, so we called it a seven-year warranty.

Of course, as defects started to manifest themselves within that pavement, as the Auditor General points out, we had some subjective analysis in terms of opinion between the contractor and the ministry as to whether that was a defect, and the extent of the defect, because all of those levels of defect triggered what actions a contractor had to take in terms of potentially repairing the pavement within that seven years.

We're now moving to more objective measures on our pavement warranties. We're basically looking at mechanical measurement, using what we could call our automated technology, as opposed to relying on visual assessment of those defects, making it more objective and less subjective. Our warranties were based somewhat on a subjective evaluation, and there certainly were differences of opinion about the extent of those issues—

The Chair (Mr. Ernie Hardeman): Hold that thought until the next round. I'm sure he'll be waiting for the rest of the answer.

The government: Mr. Dong.

Mr. Han Dong: Thank you, Deputy. To all staff, thank you very much for attending the committee and answering some of our questions.

I was pretty interested when you explained the different types of tests the ministry has now implemented, and a couple that you're developing with institutions. Could you tell us more about these tests and what exactly they do?

Mr. Stephen Rhodes: Certainly. Poor Kevin—I'm going to let Kevin go through the specific tests, ones that we have in place now as well as others that are, I think, on the horizon.

Mr. Kevin Bentley: I think we've talked about these tests in great detail. We certainly have longer technical names than the Auditor General used in her report. What you read in the report, maybe, as "extended aging" is actually called the "extended bending beam rheometer test," so there may be some differences, I guess, between what's in the report and how I describe them today.

The extended bending beam rheometer test that we talked about earlier is basically that the colder it gets, the harder the asphalt cement itself gets, which is the binder, and the pavement can crack. In addition, pavements become brittle if they remain cold for extended periods, especially in our long Ontario winters, and can crack under the loading of traffic.

The extended BBR test, for short, was developed by MTO in partnership with Queen's University. This test determines the low temperature grade of asphalt cement over 72 hours versus one hour for the standard test method. The bending beam rheometer test existed. What we looked at is conditioning the sample for 72 hours in a cold climate as opposed to just about one hour being more representative. This test, we believe, identifies asphalt that will perform better in cold temperatures.

The double-edged notched tension test, or the DENT test for short, is also a measure of that asphalt cement elasticity, or the ability of the asphalt cement to stretch and resist fatigue cracking at lower temperatures. Fracture toughness of different samples is compared using a test parameter known as the crack tip opening displacement value. Materials with a higher CTOD value, again, exhibit less cracking.

The ash content test, which has also been implemented—certainly in the Auditor General report, it was referred to as "recycled engine oil." Actually, we would refer to it as "recycled engine oil bottoms." It's actually the sludge that's left over after the engine oil has been recycled. It's not actually recycled engine oil; it's the recycled engine oil bottoms. They were being seen to be added to some asphalt cements as a low-cost modifier to soften the asphalt cement.

REOBs are a waste product, as I said, from recovered waste engine oil. We've certainly had growing concerns that the addition of REOBs could increase the risk of

premature asphalt pavement failures. Certainly, recent studies suggest that REOB contents of 3% or less are likely to be innocuous, whereas REOB contents of 8% to 10% or greater appear detrimental, and seem to be linked to early pavement cracking.

MTO has implemented the ash content test to prevent the over-modification with REOBs, since, basically, there's a strong correlation between ash content and REOBs. Basically, the ash that is left after you complete the sample is representative of the amount of REOBs that were in the material before it was tested.

Some other tests that are under development: We're looking at an X-ray fluorescence test, or XRF, which detects the elemental content of asphalt cement samples. We plan on using XRF to detect and, again, quantify the amount of REOBs that are in the asphalt cement.

As well, we're currently looking at another emerging test, which is Fourier transform infrared spectroscopy, which is under development. That detects infrared energy absorbed in the sample of asphalt cement, and the spectra from the REOB samples were overlaid with those of unmodified asphalt cement in order to find an absorbance peak corresponding to the presence of REOBs. Again, this work is being carried out to detect and quantify the amount of REOBs that may be present in asphalt cement.

Mr. Han Dong: Thank you, and I want to thank you for accepting all recommendations provided by the auditor. I know the ministry and the minister have worked very hard to develop and publicly release the action plan.

Can you give us an overview of the ministry's action plan: Specifically, what does it cover, how many recommendations does it cover and if the plan breaks down specific timelines of these recommendations?

Mr. Stephen Rhodes: Certainly; thank you. The Auditor General's report contained seven recommendations. In my opening remarks, I put them into, sort of, four categories.

In mid-February, we released an action plan which had about 50 points to it that we felt addressed the recommendations from the Auditor General and her staff. That was posted on our website—the action plan was—and it was released by the minister.

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The reason, obviously, that we wanted to do that is that it has been a successful approach for us in dealing with winter maintenance; for example, to have a very specific action plan that's measurable. We're doing that on this as well. I think there was also an urgency on our side of things because we know that the Auditor General will be coming back for a follow-up, and we have only so many construction seasons to show how we're making progress. One was upon us now, so we needed to get some changes in as quickly as possible.

Some of the actions detailed in the plan I mentioned in my opening comments—I'll mention a few of them again—were removing some of the incentive payments that the Auditor General's staff flagged for us, and that was specifically removing incentives for asphalt properties and compaction. We also raised the benchmark

attached to smoothness, which is one of a few incentive structures that we have left in the current contracts. We're continuing to implement the penalties that contractors face.

As Kevin talked about, we have some additional testing: an aging test—I won't go through the long acronym—that we've put in place, an additional component to our regime of testing that went in place on March 1, 2017.

We will be conducting more inspections and requiring suppliers to certify that they are providing high-quality asphalt cement.

As I mentioned, we would have a third-party panel that we would want to report to us in this calendar year on suggestions for improvement, especially around some of the contracting provisions, which we've talked about a bit in some of the previous questions.

The ministry has taken over responsibility for the care, control and oversight of asphalt samples, established a dedicated phone line to report any irregular issues, and we are building a new Centre of Excellence in Transportation Infrastructure which will allow us to do some additional and better research. Kevin talked about a couple of tests, but I'm sure there will be more that we'll be looking at for testing materials and asphalt cement.

These actions and several of the other ones that are in our action plan will ensure that Ontario's highway network stands up the test of time and our harsh climates, and ensure that the province continues to provide drivers with some of the safest roads in North America.

Mr. Han Dong: Great, thank you. The quality of our roads and the safety of our roads are very important. That's why it's important for the ministry to properly study these asphalt tests prior to using them and to measure the quality of the asphalt used on our roads.

I just want to know: Are there unique conditions in Ontario that make evaluating and, if possible, the testing used in measuring asphalt cement quality more challenging?

Mr. Stephen Rhodes: I'm going to let Kevin give you a little bit more information on that particular question in a moment here.

Mr. Kevin Bentley: As I said before, even though we think of Ontario as one province, certainly the climate differs across Ontario, especially when you get into northern Ontario and southern Ontario, in terms of the high- and low-temperature ranges that we can experience.

As I referenced before, that is why we use different grades of asphalt cement. Certainly the grade of asphalt cement really doesn't actually refer to the quality of the asphalt, but more in terms of how that asphalt cement is expected to perform under certain traffic and climate conditions.

Asphalt cements are graded by both what we call a high- and a low-temperature rating. For example, a 58 minus 28 grade means a high temperature of 58 Celsius and a low temperature of minus 28 Celsius. Asphalt cement grades are selected, again, depending on where

you are and where that pavement will be constructed in the province, based on the low-temperature zone that the pavement project is in—it could be minus 22, minus 28, minus 34, minus 40—and also the high-temperature range based on the temperature and the traffic volume. It's not that we expect to get a temperature of 70 degrees Celsius, but when you have the interaction with traffic, that's also the range, again, anywhere from a high range of 52 to 70.

A typical asphalt grade in southern Ontario is what we call 58-28 or 58 minus 28. When traffic is heavy and slow-moving on some of our highways, that high end can be bumped up to a high end of 70, so we might use a 70 minus 28, depending on the traffic conditions. Again, that's more to improve the rutting resistance of the pavement.

Finally, in the north, the grade might more apt to be basically a 52 minus 34 or a 52 minus 40. Again, that lower temperature grade means that that asphalt cement is softer and is more resistant to cracking.

Mr. Han Dong: Thank you. As you know, we are making a \$190-billion infrastructure investment, and a big part of it will go to transportation infrastructure—roads and bridges. Can you tell us how these investments have improved the quality and the quantity of our roads and bridges and why it is important to have a class A or first-class road network here in Ontario?

Mr. Stephen Rhodes: Sure. I'm going to ask Linda, who has been just unusually quiet, to answer that particular question.

Ms. Linda McAusland: Thank you. I'm Linda McAusland. I'm the ADM of the provincial highways management division.

I'd say that investment in transportation infrastructure provides enhanced mobility, time and cost savings, improved safety, reduced use of fossil fuels through smoother roads, broader economic growth, improved business opportunities and increased public satisfaction.

Bridge and pavement conditions have improved significantly, almost reaching desired targets. I can say that since 2003 Ontario has invested almost \$28 billion to design, repair and expand highways and bridges across Ontario. The investment has resulted in a road network that is among the safest in North America.

Mr. Randy Hillier: Chair, point of order: The committee is studying the Auditor General's report on premature cracking, not the budget documents or anything else. If we could focus on the Auditor General's report on premature cracking.

The Chair (Mr. Ernie Hardeman): Thank you very much. I would just point out to the member asking the question that the questions should relate to the auditor's report.

Mr. Han Dong: The question was to do with the quality and the quantity of the road network. I think it's relevant to the topic that we're studying.

The Chair (Mr. Ernie Hardeman): I would just point out again that the questions should relate directly to that part of the ministry as it relates to the auditor's report, not the general overtone of the ministry.

Mr. Han Dong: So I'll ask—

Ms. Linda McAusland: Perhaps I could focus on the last five years, which the auditor's report focused on, and give the order of magnitude of the program that we've been looking at as a result, where the asphalt cracking could have happened.

I just want to note that over the past five years, it has been \$13 billion. We've paved 11,642 lane kilometres of pavement and repaired and constructed 700 bridges. In 2016-17 alone, we paved 1,928 lane kilometres and repaired and constructed 139 bridges. So as we go forward and look to how the report will help inform us and how our action plan will guide our program, we expect that 5,000 kilometres of highways and more than 750 bridges will be built and repaired across the province by 2022 and about 2,400 kilometres of these highways and 200 of these bridges will be in northern Ontario.

So just some context of the magnitude of our program.

The Chair (Mr. Ernie Hardeman): Thank you very much for that and—

Mr. Han Dong: How much time do I have left?

The Chair (Mr. Ernie Hardeman): You have about four minutes left.

Mr. Han Dong: Okay.

Mr. Randy Hillier: Might as well give it to us.

Mr. Han Dong: Very nice, Randy.

Thank you for that. I'm aware that the ministry is celebrating its 100th anniversary. I know that the ministry has been on the forefront of innovation. Given the topic today, could you elaborate on some of the ongoing ways in which the ministry is literally paving the way by playing the leading role in setting the industry standard, specifically about road safety and quality?

Mr. Stephen Rhodes: Sure. The ministry is considered a leader in transportation infrastructure design and construction. Staff from the Ministry of Transportation have participated in a wide range of technical committees, both in Canada and North America. I'll give you a couple of examples.

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MTO staff are on the expert task group for asphalt cement and asphalt mixes. They are on the Canadian Standards Association committee for concrete and cement. They are participating with the Transportation Association of Canada—TAC, for short—standing committee for pavements, soils and materials. They are on the American Association of State Highway and Transportation Officials subcommittee on materials. They are participating in the Transportation Research Board's committees on concrete pavement design, asphalt pavement design, asphalt and concrete materials and, finally, are a major contributor to the ongoing development of the Canadian Standards Association's Canadian highway bridge design code.

Participation as technical experts is extremely important. It's something that the ministry continues to have our key staff participate in, and we benefit from those exchanges with other provinces, territories and states in terms of our practices.

Mr. Han Dong: Can you explain more about safeguards the ministry has in place to ensure that the province's highway infrastructure is properly inspected and safe for both contractors and the travelling public?

Mr. Stephen Rhodes: Sure. Maybe I'll have Kevin just give you a little bit more insight into the inspection regime and the processes that are in place in Ontario.

Mr. Kevin Bentley: Certainly, safety and quality, before and even during construction, are paramount to the ministry. As a result, there can never be enough oversight. To ensure the safety and quality of the work being performed, all of our contracts have several levels of oversight in place—

The Chair (Mr. Ernie Hardeman): If I could just stop you. Please speak directly into the microphone. We're having a little trouble catching you.

Mr. Kevin Bentley: Okay, thank you.

They have several levels of oversight in place, including both private and public sector staff who oversee and inspect all ongoing and completed projects.

The ministry ensures oversight through the use of contract administrators and inspectors, to ensure that the roads and bridges are built according to provincial standards and specifications. This is to ensure safety, durability and value for money.

We have recently updated our requirements to include enhanced oversight, care and control of samples, and have been updating our requirements for quality verification engineers, who guarantee that our bridge and foundation works are constructed as specified.

Ontario is the only jurisdiction in Canada that has legislation in place requiring bridges to be inspected every two years.

As of this year, the work of quality verification engineers is subject to random audits, to ensure that their work meets our requirements. Going forward, we will test replacing the current quality verification engineer certification process with a new process conducted by ministry staff, starting with a minimum of 15 contracts this summer.

Mr. Han Dong: How much time?

The Chair (Mr. Ernie Hardeman): Two minutes.

Mr. Han Dong: Two minutes? Maybe very quickly, if you can explain to the committee some details about the end-result specification system. I know the system has been in use since the 1990s and is highly regarded.

Mr. Stephen Rhodes: I'll have Kevin do the executive-summary version of that, because I know there's only about a minute and a half left.

Mr. Kevin Bentley: We covered that under one of the previous questions, but, again, we've set up this end-result specification system to address the inherent variability, and also the inherent variability that comes with producing large quantities and placing large quantities of materials.

Certainly, it's not just the ministry. Other road authorities across North America set acceptance ranges for test results. Materials within an acceptable range are suitable for use during the construction of the project. Materials

that do not meet the requirements are rejected and are not used.

The end-result specification system is such that within an acceptable range, lower or higher price adjustments are typically applied to the price the contractor submitted. When the material meets the highest end of the range, there is a payment adjustment or incentive upwards. When it is towards the lower end of the range, there is a price reduction or a penalty.

The ministry's end-result specification system is used to ensure high standards for materials, such as asphalt, used in Ontario's highways. Many other jurisdictions have a similar approach, and an end-result specification system is seen as an industry standard in North America.

In some cases, contractors who exceed expectations are provided payment incentives, because the workmanship or the materials provide an increased benefit by exceeding the life of the material provided.

The Chair (Mr. Ernie Hardeman): We will go to the next question, from the official opposition. Mr. Harris's?

Mr. Michael Harris: Yes. Thanks, Chair. I want to thank the auditor and her team for her great work on this detailed audit observation and, of course, welcome ministry officials to committee today.

I will start out—obviously you've had some time with this information. I want to go directly to a question that my colleague first asked, which I feel we had an unsatisfactory answer on. That pertains to a 2014 whistle-blower who "approached the ministry with detailed information on how one contractor was switching samples in order to obtain bonuses." It goes on the say that "the ministry has not taken any action to investigate which contractors could have switched samples and impose fines on them." Why was that not done?

Mr. Stephen Rhodes: I'll start. Kevin may have some more to add. I think, in Kevin's answer, he indicated that that matter was turned over to internal audit staff, and a decision, which predates me, was taken that more focus would be put on the changes to the processes at that particular time. But, certainly, on a prospective basis, any issue that is raised with us will be referred to the audit staff and other authorities as needed—

Mr. Michael Harris: I think it's important to go back though—and I hate to interrupt you, because we only have about 20 minutes here. We really want to hone in on the specifics of the whistle-blower complaint. Why wasn't the whistle-blower's detailed information followed up on by the ministry? What information was provided to the ministry? What specific information was provided?

Mr. Stephen Rhodes: I'll start, and then I'll let Kevin answer a component of that. The internal audit division was engaged. There was a review of the matter. It was felt at that time that there wasn't sufficient information to go further.

Mr. Michael Harris: Why not?

Mr. Stephen Rhodes: I'll refer it to Kevin, because he was there for that period of time. He may have some additional information that I'm not privy to.

Mr. Kevin Bentley: Actually, Deputy, I wasn't there at that time.

Mr. Stephen Rhodes: The only other individual who was there—

Mr. Michael Harris: It's unfortunate—you know, we expect these answers, politically, to come from the minister, not answering. But you're the deputy, and you've got assistant deputies here. The auditor has laid this out in her report. I've given you an opportunity to go back.

The only thing that I can assume here is, frankly, that the whistle-blower who brought this detailed information—his accusations, or hers—was completely disregarded by the ministry. There's no emphasis or acknowledgement from your ministry to go back and actually find out what happened here. We've got a major issue that was brought forward by the auditor, yet you're telling me that there was no action. In fact, the OPP seemed to think that there was enough information here to proceed with, perhaps, criminal civil charges, yet the ministry declined to pursue those. What did the OPP have that you didn't?

Mr. Stephen Rhodes: So we do have one individual here, Gerry Chaput, who was the previous ADM of the provincial highways division. So I think I'll refer to—

Mr. Michael Harris: Come on up, Gerry.

Mr. Stephen Rhodes: I'll let Gerry come up and just talk to you about his experience during that time frame and how the matter was referred to audit and where it went from there.

Mr. Michael Harris: Thanks, Gerry.

Mr. Gerry Chaput: I'm Gerry Chaput, former assistant deputy minister of provincial highways, and now with Metrolinx. Thank you for the question. In 2014, yes, the notice was provided to the Ministry of Transportation, and we did refer that immediately to our internal audit. We take those issues very seriously, and we look into all our complaints or issues that are raised of that type.

When it was reviewed, we also had to consider the source of the information. It was anonymous. I was not presented with any documentation. I was not presented with photos or—

Mr. Michael Harris: What were the findings of the audit, then? I get the anonymous part of it, but what were the findings of the audit? What did they come back as?

Mr. Gerry Chaput: I understand there was an allegation that samples were being switched.

Mr. Michael Harris: Okay. And did your audit team come back with a report one way or the other?

Mr. Gerry Chaput: I never saw a final report.

Mr. Michael Harris: Why not?

Mr. Gerry Chaput: In the end, in the discussions that went on—I'm not sure when the final report was completed or whether I—

Mr. Michael Harris: When were the OPP engaged in this?

Mr. Gerry Chaput: I was not involved with the discussions with the OPP. I was involved in the discussions with the internal audit team or the audit director. During that time, we talked about the security of the samples that

we have in place, what we do in terms of the tagging of the bags with an untamperable tag, the fact that the bags are marked and that the samples are witnessed by people, from an oversight perspective, working for the Ministry of Transportation either as a consultant or as an employee. Based on those understandings and the allegations that were presented, I believe that the challenge would have been to have actual documentation or proof that we could validate the allegation.

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Having said that, that's when we started to initiate the process, which the ministry has laid out in its action plan, to consider having the ministry begin to control the taking of those samples.

Mr. Michael Harris: But when the OPP was involved and they felt they had enough to go with, why wasn't that pursued further?

Mr. Gerry Chaput: During that time, I was not consulted by the OPP. The OPP never consulted me.

Mr. Michael Harris: Were ministry officials in discussions with the OPP on this particular issue?

Mr. Gerry Chaput: I'm not aware of any ministry staff directly involved in discussions with the OPP. There's potential—

Mr. Michael Harris: Who would have been the minister at the time—Minister Murray or Minister Del Duca?

Mr. Gerry Chaput: In my over 30 years, I confuse the years of which ministers were which. I would imagine we could find that online, but I'm not sure.

Mr. Michael Harris: Do you know if there were any discussions or email correspondence whatsoever with the minister or minister's staff pertaining to this whistle-blower's accusation—any at all?

Mr. Gerry Chaput: I'm not aware of any. I did not have any—

Mr. Michael Harris: Are any of you here today aware of any information that was shared with the minister? Do you believe he was, in fact, notified of this whistle-blower's accusation?

Mr. Gerry Chaput: I'm not aware. I never notified the minister, no.

Mr. Michael Harris: Deputy, I'd ask you if any of your officials are aware of any notification given to the minister or minister's office pertaining to a potential whistle-blower allegation of sample switching.

Mr. Stephen Rhodes: I've been with the ministry since February 29, 2016. This predates that, but I'm not aware of any issues that you raised.

Mr. Michael Harris: There was no involvement from the minister's office as to this particular investigation.

Mr. Stephen Rhodes: It's never been brought to my attention.

Mr. Michael Harris: Randy, do you have—

Mr. Randy Hillier: Yes, I've got a couple of follow-up questions.

The Chair (Mr. Ernie Hardeman): Go ahead, Mr. Hillier.

Mr. Randy Hillier: Listen, even though people come and go in the ministry, there is a requirement for

documentation of actions. So whether or not anybody sitting here today was there at the time, there needs to be documented evidence of what transpired.

I want to just speak to Mr. Bentley. You mentioned in your statement that there were discussions—you had discussions; there were discussions—which ended any further investigation. We know that the OPP had credible information, that there was credible information to go forward, but there were discussions which ended it. Who had those discussions?

Mr. Kevin Bentley: I can speak to that. As Mr. Chaput mentioned, there was an internal audit that looked at that. There was a recommendation from that internal audit that we should initiate a conversation with the OPP. My understanding is that the conversation was held with the OPP. There was a discussion around the allegations and any supporting information around those allegations. Following that meeting, the senior staff that were involved made a decision not to pursue it further.

Mr. Randy Hillier: So who had the discussion with the OPP?

Mr. Kevin Bentley: Some senior managers.

Mr. Randy Hillier: Senior managers. Everybody here is senior management in the ministry, so—

Mr. Kevin Bentley: So staff involved directly in the administration of that particular contract.

Mr. Randy Hillier: Okay. Do you recall who the minister was at the time?

Mr. Kevin Bentley: No, I do not.

Mr. Michael Harris: At what point in the year of 2014? Was it spring, fall, summer? What month?

Mr. Kevin Bentley: I don't have that information. We'd have to get back to you with that information.

Mr. Randy Hillier: Certainly, we've got some big money sitting here with some high-calibre management and intellect, and we're being told that we can't remember what time of the year, let alone who the minister was? I find that inconceivable. I find it unbelievable that we're not aware of who had what discussions.

I want to follow this up. That was 2014. We've also seen from the evidence that the test sampling didn't—

Mr. Bob Delaney: Chair, on a point of order.

The Chair (Mr. Ernie Hardeman): Point of order.

Mr. Bob Delaney: I am uncomfortable with the degree to which this discussion on the Auditor General's report is drifting into policy, which, in fairness, the people before us cannot comment on.

The Chair (Mr. Ernie Hardeman): I think this issue is directly from the auditor's report.

Mr. Randy Hillier: In 2014, the ministry becomes aware of sample switching, serious allegations of this, but it is not until December 2016 that they actually take any actions to prevent samples being switched. Why did it take that period of time?

That's from the reports that we've seen on your 50-point action plan. In December 2016, you came up with a plan to stop this. It seems inconceivable to me, again, that senior management would not find it appropriate to put in

robust safeguards immediately. Can you explain why it took a year and a half after those allegations?

Mr. Han Dong: Point of order, Chair. There's something I want to clarify. I thought the purpose of this committee was to discuss the Auditor General's recommendations and to what degree—

The Chair (Mr. Ernie Hardeman): That's not a point of order.

Mr. Han Dong: That is a point of order. That's a question put to the Chair. I need to verify what's the purpose of this committee. Is it whether or not we discuss the implementation of the Auditor General's recommendations, or are we—because I just feel that some of these questions could be better put in the estimates committee.

The Chair (Mr. Ernie Hardeman): I will point out to the member that the purpose of this committee is to review the auditor's report with the delegation, any part of the auditor's report, and that's what this is dealing with. So that's not a point of order.

Mr. Han Dong: Thanks for the clarification.

Mr. Stephen Rhodes: In response to the question—I'm going to do a little bit at the front end and Gerry is going to buttress me at the end.

You're absolutely accurate in terms of on a go-forward basis we have taken custody of the samples into the ministry. Earlier in 2016, we had a pilot project going on on that; we've now done it in full.

I'm going to refer to Gerry because I believe, and I could be wrong on this front, that in the wake of some of the discussions that they had on this front, there was also a revisit to the processes that were in place at that time to review where the sample procedures were at.

Mr. Randy Hillier: I just want to know why. You've got serious allegations brought forward, credible allegations of samples being switched. Surely that would—and you're paying bonuses on this stuff as well. You're paying out public money for contracts. If somebody doesn't say, "We'd better tighten up the ship here and make sure that the samples we're paying out on are actually the samples we're driving on and not the samples from somebody else"—right?

How could it take two years to come up with that decision to safeguard those samples?

Mr. Gerry Chaput: Thank you. Again, I want to mention that we had a significant process that was already in place. The fact that a contractor decided to cheat on a job—apparently, or allegedly—is what we were trying to administer. That's where we took immediate action with the internal audit. That robust process includes, as I've mentioned, tamper-proof bags.

If you want to cheat a system—if you want to steal a bicycle, you'll steal it, if there's a lock on it or not. What we're talking about is, we had a lock on it. We had everything in place, and we ran into someone who decided to cheat. Therefore, we took it to the internal audit and we did begin the process to determine how we could improve that. That's obviously where we came into

the integrity of the sample and the chain of control of that sample.

In order to administer that new process, to get the ministry to be able to turn around and change its process so that we collected it, it required some work. It's not as simple—

Mr. Randy Hillier: But this was before 2014. You even had evidence long before that, in 2011, that the test samples were unbelievable for some of these results, where all results were coming back perfect and no deviations. That was in 2011. Certainly that should have rung the alarm bell then.

Your suggestion that this is one contractor—what we know is that there's one allegation. It certainly doesn't appear that your robust system was able to independently prevent samples being switched. And that's from 2011.

Mr. Gerry Chaput: Since 2012, we've issued over 1,700 contracts, and we're talking about one or two here.

So if I could go on, I'll just finish the fact that to change our process was not as simple as saying, "Okay, we'll just go from A to B." We had to recognize that staffing had to be retained and trained in order to be able to observe how to take the sample, to ensure the sample was taken and controlled carefully. There are numerous jobs that go on; they go on, on the 401, during a night shift. So we had to ensure staff were available. We can't slow up the contractor's operations; otherwise, we run into challenges in terms of extensions of time, and no one wants the job to run longer than it does.

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Therefore, it took some staffing changes. It took some budget requirements in order to get the budget for consultants to administer our projects as well. It took development of the process. It took training of those staff on how to take the samples and control their integrity. And it took time to implement that. So we did implement trials in 2016.

We also had to familiarize the industry with the new process.

Mr. Randy Hillier: Hold on. I've been involved in enough construction projects. We take samples on all kinds of things, core samples—we do all kinds of things in contract administration to bear out that what we've contracted for is what we're getting. It does not take a rocket scientist to figure out how to collect samples and how to ensure that samples are legitimate. It doesn't. And it doesn't take multiple years to come up with a process to ensure that the sample that you're receiving is a sample from the job site that you're paying for.

Mr. Gerry Chaput: I think you're limiting the training to one single aspect on a construction job. As we've mentioned in the past, safety is a very high priority for the Ministry of Transportation, and was while I was ADM. The training that goes on for a job includes job safety, how to operate in traffic, how to deal with lane closures, and how to be safe on the job on a construction site. That training also takes time. There's training on policies. There's training on administration of a contract

to ensure that the documentation is correct, to ensure that the contractor is doing their job.

So I hear you. There is a portion of training that is applied to how to take a sample. But I would remind the committee that there's additional training that takes time, which can slow the implementation of hiring more people to be able to do the whole operation.

Mr. Randy Hillier: Well, certainly the person going out for sampling—not everybody is a new employee. Not everybody is going through a whole brand new training cycle and regimen. You have experienced, long-time employees at the Ministry of Transportation, and they are not all having to be retrained on health and safety and security in order to take a different sample.

Mr. Gerry Chaput: But what we're talking about is increasing the oversight of our contract. So where before, the ministry would allow the contractor to take the sample and have it shipped, we now had to have someone do that, and that is over and above what we were doing in 2014. So indeed, it did require more staff; it did require more consultants; it did require more training.

Mr. Michael Harris: This alleged contractor that provided the false samples: Have they been allowed to rebid and have they in fact rebid contracts for the MTO?

Mr. Gerry Chaput: I didn't get the name of the contractor. That was left anonymous.

Mr. Stephen Rhodes: My understanding was that the complaint was an anonymous complaint. I don't believe it indicated who the individual was or who the contractor was.

Mr. Michael Harris: Have you seen the final audit report? Have you been briefed or read—

Mr. Stephen Rhodes: I've been briefed, similar to what Gerry has conveyed to the committee here today, but I have not seen the final audit report.

Mr. Michael Harris: Will you pledge to read the report?

Mr. Stephen Rhodes: I'm happy to pledge, yes.

Mr. Michael Harris: Can we ask for it for the committee?

Mr. Randy Hillier: Is there anything that prevents that audit report from being shared with the committee?

The Chair (Mr. Ernie Hardeman): You can ask, but the whole committee has to decide whether they want to see the report.

Mr. Michael Harris: I guess with the remaining time left, I'll ask this. We talked about the bonusing, but since 2007, the budget for repairs has more than tripled: \$45 million to \$125 million. One would think that bogus samples provided led to more bonuses, but have also led to more repairs. From \$45 million to \$125 million: Why is it necessary to have tripled the repair budget?

Mr. Stephen Rhodes: Certainly we have a very large injection of funds into the ministry, which we're pleased with, to do a great deal of work. The increase you're speaking of is not solely related to year-over-year increases to the same sort of amount of time—

Mr. Michael Harris: Then let's talk about one specific example. Highway 403, 2006, a \$23-million

project: It was supposed to last until 2021. They were paid about a \$700,000 bonus. In 2008 and 2011—twice—they had to repair that road, at a cost of \$12.3 million.

Why did that have to happen, the 403? We talked about the uniqueness of Ontario highways, and I get the north being a unique climate—but the 403 in Toronto? Tell me why taxpayers had to spend \$12.3 million more—

The Chair (Mr. Ernie Hardeman): We'll have to save that answer for the next round. We go to the third party. Mr. Hatfield.

Mr. Percy Hatfield: I just want to ask a couple of questions at this stage. My understanding—I could be wrong—is that there are something like 80 contractors. You have the top 10. Say they do 73% of the work, and then the rest of them get what's left. Are 10 major contracting firms enough for Ontario, or is that a concern because there aren't more and all the same people are getting all the same work?

Mr. Stephen Rhodes: Sure. The table you're referring to is an appendix in the audit report, which looks over, I believe, the last 10 years, if I'm not mistaken—it's 2010 to 2015-16—and shows the volume of work that has gone to particular contractors.

Overall, we're happy with the composition of contractors we have and the number of contractors we have. Obviously, we want as many qualified contractors—that have gone through our fairly rigorous processes—bidding on jobs, hopefully then getting the best value for money at the end of the day. It's not always the case on every contract, depending on the geography, the time of year and where we're doing the work, but in general, we're happy.

The system that we have in place to review their capability, the number of projects they have under way, and their ability to deliver is reviewed on every single contract. Kevin has walked through a little bit of that before.

That, I think, would be where I sit preliminarily, and I'll wait for your follow-up. I'm sure you'll have one.

Mr. Percy Hatfield: It's not much of one, I'll admit, but you obviously know the contractors who are giving poor performance. They're not doing a good job, and you call them on it. You've been lenient with them in the past, and yet they keep on getting new contracts.

I'm just wondering if—I don't know. I suppose if I were a grade D—I used to get Ds in school—at some point, they would say, "You know, we'd better not move him to the next grade."

Why do the people who continually give you poor performance keep on getting new contracts?

Mr. Stephen Rhodes: I can let Linda speak to a little bit of that. I would say that we have a pretty rigorous process in place, and for those who are not delivering, their performance index goes down, and it eventually affects the ability for them to bid on new jobs.

So I would slightly challenge the perspective that the same contractors that aren't performing are getting more

work, because that is not actually what I'm seeing since I've been there. But I'll let Linda give you a little bit more information.

Ms. Linda McAusland: Linda McAusland, ADM. The performance of our contractors is reviewed regularly. Where we get infraction reports, those do come individually to our qualification committee. We have a committee membership of five, and we have two ex officios from OMAFRA and from the Ministry of Labour who are also in a regulatory oversight role.

We take a look at the infractions, and we try to work with the contractor on a go-forward basis: What was the nature of the infraction? Was it a safety infraction? What's their current allocation of work? Where are they currently geographically allowed to work? If it is of a large enough nature, what kind of response do we need to take?

We do try to keep the market competitive. We do have a lot of companies consuming each other, so maintaining that level of competitiveness is becoming a challenge. We do have a robust market, but we do have a lot of companies overtaking each other. That is something that we're very mindful of.

We do have the ability to limit the value of work that they deliver until we see that there has been some progress. We also have the ability to limit the geography they work in. If they are a company that is trying to venture out into communities where they have no experience or have a limited network to pull from, we do have the ability to say that we're not comfortable with them working there until we see progress in other areas.

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Then we ask for an improvement plan. We ask them to demonstrate how they're going to reconcile the infractions that we've seen on specific projects, and then we do a review on a regular basis, where they come back and show us where they have improved, where the value of that improvement plan has been demonstrated in our projects and whether we're ready to reconsider their current rating, whether we need to keep it at the same or whether we actually have to minimize the work they do at a lesser rate. That's something we do on a regular basis.

Mr. Percy Hatfield: All right. Let me just switch gears for a moment. We just heard that in the case of the anonymous allegation of sample testing, that allegation didn't contain the name of the contractor who was supposedly doing the work. If that's the case, why did the OPP come of the opinion that we should lay charges in this case and then put it back to you to lay those charges? If the OPP didn't know, if there was no information about who the contractor was—how could the OPP possibly say, "I have enough information to lay charges if you want to lay them," if they didn't know who did it?

Mr. Stephen Rhodes: I'm not really sure how to answer that one. Maybe Gerry has a bit more information on it than I will have.

The Chair (Mr. Ernie Hardeman): Just before we go on, I think we need to clarify: The OPP, in the

auditor's report—there's no mention that they were wanting to lay charges or going to lay charges or even thought that they should lay charges. I just want to make sure that that's clear.

Mr. Percy Hatfield: Okay. That's fair.

The Chair (Mr. Ernie Hardeman): And now we can go on with the questions.

Mr. Percy Hatfield: No, no. If that's the case, then I withdraw that. I wasn't aware of that.

The other question I have is that when contractors breach safety regulations—I take safety very seriously, but my understanding is that even when it's proven that they have breached safety regulations, they still qualify for new contracts.

Ms. Linda McAusland: Before they're able to deliver on a new contract, if there has been a safety infraction, we do require an improvement plan, to have them come to us and describe what happened in the incident and what their plan is going forward to mitigate that happening again. We do have increased oversight where they are granted, usually on a limited dollar value and likely on a limited geographical basis also.

We try to contain the work they've done if there is a safety infraction, and we don't allow them to expand until we're comfortable that they've acknowledged the issue and that they've taken the appropriate steps to ensure that it doesn't happen.

Mr. Stephen Rhodes: And there's one more thing I think Kevin would like to add to that, if that's okay.

Mr. Kevin Bentley: Just a couple of things that I'd like to add. One is that there was reference made previously to the contractor performance rating. Safety is one of the aspects of that rating, upon which they're rated for every contract, so it can affect their overall corporate performance rating.

As well, I'd like to add that my recollection of the Auditor General's report was that it wasn't that we didn't deal with those contractors in terms of the safety infractions; it was that the sanctions that we put in place related to those safety infractions were not large enough to prevent that contractor from rebidding. It's not that we didn't act upon the safety violations. We did put sanctions in place, or restrictions on those contractors, but it wasn't large enough to restrict them from bidding. That was, I believe, the observation that the Auditor General made.

Mr. Percy Hatfield: All right. And getting back to the 80 contractors and the 10 at the top: I know that when Minister Murray was the minister and I first came here after a by-election and fell into "girdergate" on the Herb Gray Parkway, at the time they were saying that construction projects in Ontario have become in many cases so large that only international firms could bid, because of the size and the money involved, and then they could put together consortia of local contractors.

When we're dealing with road work in Ontario and contracts on paving, are they structured in a way that only—I shouldn't say "only." Are they structured in a way that favours large companies, which can put up the

performance bonds or whatever, as opposed to the middle-of-the-pack kind of contractors?

Mr. Stephen Rhodes: I'll take a crack at the first part, and Kevin will fill in some parts.

I know each of the regions in the provincial highways division reviews the rehabilitation and new construction requirements every year. We post our annual plans both in the southern part of Ontario and the northern part of Ontario for where our priorities are, and there is a conscious decision made about the scale and scope of the projects, the mix of the projects and the availability in the marketplace for the contractors to bid that. So we try very hard not to be the ones who are driving the market in terms of making the costs more because we put too many projects of a certain size out.

There's a mix that we try to get out there that shows value for money and also matches, hopefully, the capacity that's out in the marketplace. Kevin can maybe give you a little bit more colour on that.

Mr. Kevin Bentley: I think as was noted in the Auditor General's report, in the five-year period, we had put out 600 large construction projects, those being projects over \$1 million, with an average value of \$9 million. But on the other hand, we had put out 1,450 smaller construction contracts at an average price of about \$400,000 a contract.

As well, as the deputy mentioned previously, we do have different ways that a contractor can basically qualify financially to bid on our contracts. For what we call smaller contracts in that \$250,000 to \$1-million range, that contractor doesn't have to go through our pre-qualification system. They can instead use basically a bond or some other financial security to qualify, as opposed to having to go through a pre-qualification process. So as the deputy mentioned, there are a lot of steps that we take to make sure that we do get a good blend of smaller, medium-sized and larger contracts, and there are basically different types of work for all different-sized contractors.

Mr. Percy Hatfield: One final question for this round: Do all of the contracts given out by your ministry go to Ontario companies, Ontario contractors, or do people bid on Ontario road work from other provinces—or other countries, for that matter?

Mr. Stephen Rhodes: It would be a blend. As you mentioned in your earlier question, the size and scale of a particular project may warrant that only certain contractors of a particular size can take it on, and that may mean that members of the consortia may be from other parts of Canada, other parts of the US or farther afield. But to Kevin's point when we talked about the number of projects here, I don't have hard and fast percentages, but a good proportion of our projects are done by Ontario-based companies. But there is a blend.

Mr. Percy Hatfield: Thank you.

The Chair (Mr. Ernie Hardeman): Thank you. To the government: Mr. Dong.

Mr. Han Dong: I always enjoy the questions asked by my good colleague from the NDP caucus, Mr. Hatfield.

I'll try to follow suit in the same manner. I hope I can pass it on to my Conservative colleagues as well.

Ontarians both expect and deserve a quality drive, and that comes from smooth, well-paved roads. Could you please explain why you've decided to continue to provide contractors with an incentive for pavement smoothness, and why it is important to have this incentive in place? How do you measure smoothness? Lastly, can you please provide more information on how the ministry penalizes contractors who do not provide pavement that meets the ministry's standards?

Mr. Stephen Rhodes: Thank you very much for the question. I'm going to have Kevin answer this question, if he is ready and available.

Mr. Kevin Bentley: As was mentioned earlier, with respect to payment incentives for asphalt, we have suspended all incentives for what we call asphalt mix properties. That would be things like the gradation of the granite or sand that goes into the mix, making sure that we have the amount of air, what we call air voids, in the mix, as well as compaction. Those are all things that we would call asphalt properties. Then we also have asphalt smoothness.

While those other incentives were suspended, we felt it was important that we continue to provide incentives for quality and workmanship, not asphalt properties. As a result, we are continuing with the payment incentives for smoothness. We have, however, set a higher benchmark or requirement for the smoothness of the asphalt driving surface. So while we're continuing with the incentive, we have actually raised the bar before they would be eligible for an incentive. Again, contractors who are now able to meet that higher requirement would still qualify for an incentive.

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We feel that a payment incentive for smoothness will reward contractors who focus on workmanship and those who work hard to provide that high-quality, smooth driving surface.

We believe this provides value to the travelling public in terms of the ride quality, as well as contributing to long-term durability and positive environmental benefits through the overall reduction in fuel consumption and greenhouse gas emissions.

Ontario currently has some of the most stringent requirements for pavement smoothness, and we've made them even more stringent. As part of our recent changes, we have raised that requirement before a contractor could qualify for a payment incentive.

We do require the use of standardized equipment and methods—this isn't a subjective assessment; this is a mechanical measurement—to quantify the smoothness of the pavement, which is consistent with other North American road authorities.

On the other hand, we will continue to penalize contractors whose finished product, or, basically, the lack of a smooth product—they would be subject to financial penalties if their final product is not a smooth experience for the driver.

Mr. Han Dong: Contractors are an important aspect of the infrastructure-building that we have committed to doing. But at the same time, as a government and a ministry, we need to hold them to account. I want you to tell the community what action the ministry undertakes to ensure that contractors bidding on large provincial highway contracts have the necessary capacity to complete the work, with the necessary financial resources, while ensuring safety and quality.

Mr. Stephen Rhodes: For sure. Linda is going to take a bit on this, but I just flagged that the ministry has a number of administrative controls and oversight measures in place.

Linda is going to give you a little bit more information about the qualification system we have, and how it works and who's involved.

Ms. Linda McAusland: We've touched upon a couple of items, but I will go into deeper detail on some of the oversight provisions that we do have.

We have a contractor qualification system. It's an objective, impartial method of determining from whom to accept bids, in addition to being an effective instrument of control over those successful bidders when they do bid on our work.

So we do have a qualification system. It's the senior-level body I mentioned. I chair that, as the assistant deputy minister. We have five senior ministry officials, and two from other ministries who are also in a regulatory oversight role.

All contractors must be pre-qualified to bid on capital contracts with a value greater than \$1 million. The ministry assesses and rates the financial and technical capabilities. We deal with about 400 contractors annually.

Rated contractors are assigned a financial rating that reflects the ability of the contractor to undertake the work from both a financial and technical standpoint. That financial rating is reduced as work on hand is reported, and contractors must demonstrate that they have the necessary rating available to bid on any contract.

In addition to relying on independent financial statements and third-party audits by the contractor, we perform a number of on-site compliance audits every year, to ensure that the financial information and technical requirements are an accurate reflection of their financial capacity.

We closely observe construction liens and contractor bidding, and performance on the construction site, and if there are any bidding concerns, the matter is referred immediately to the qualification committee for a response.

The committee's focus is to improve contractor performance. However, we do have the ability to restrict the work in a large way as to what they're actually able to bid on.

How we deal with poorly performing contractors: We are reviewing our current qualification process. I've gone through it in some detail, in answer to the member from the NDP. As a result of the auditor's findings, we are looking more deeply into how we do that.

Things that we're looking at over the course of the following year could include: confirming contractors'

financial information with other agencies and municipalities, understanding where they've done work in other jurisdictions and what their ratings are there; implementing a third-party credit-monitoring tool that provides financial payment information; and increasing contractors' education of our financial reporting requirements so that we're in line with the requirements of the centre.

That will be part of what we'll be looking to our third-party panel for: to provide us some advice and insight on practices in other jurisdictions and how we may be able to incorporate those into our system.

Mr. Han Dong: Great. How much time do I have?

The Chair (Mr. Ernie Hardeman): About eight minutes left.

Mr. Han Dong: That's great. I'm aware that the ministry received a report from the Auditor General back in 2015 on winter maintenance. In response to this report, the Minister of Transportation took action and asked the AG to provide a follow-up report. That was, I believe, provided maybe a year ago.

Can you tell me what lessons were learned from the winter maintenance audit from a couple of years ago and how you are applying those lessons to the most recent audit?

Mr. Stephen Rhodes: I'll start, and I know Kevin, who spends a lot of his time on that particular file, will have a few things to end. I wouldn't be just if I didn't give him a few words.

You're absolutely right. The Provincial Auditor, in November of 2016, did a follow-up audit on the winter maintenance value-for-money audit which was originally done in 2015. You may recall that I mentioned early on that that was one that we had a fairly robust action plan attached to with a lot of work on it, which I think has put us in pretty good stead. We don't have all of the recommendations landed yet in full, but in the most recent audit from the Auditor General, between things completed and things that were in process, we had about 84% of things done. There are still a few more areas to go. The job is never done, for sure. But we certainly found that process of developing a very detailed action plan with measurable actions very effective.

Maybe I'll let Kevin flag a few things that he may want to say.

Mr. Kevin Bentley: I think probably our biggest lesson learned was in terms of dealing with developing an action plan and publishing within 30 days, in terms of laying out all the actions that we're going to accomplish and laying it out, in the case of the winter, by winter season—with the construction audit, it's sort of by construction season. We think that was a very valuable lesson learned, in terms of laying it out and laying it out with timelines and then being able to track all of your accomplishments with respect to those actions that you've initiated because of the Auditor General's recommendations. That was probably the biggest lesson learned: putting that action plan down and documenting it.

The other lesson learned, I'll say, is that certainly in both cases—most recently, in terms of this particular audit, in terms of developing the action plan—we used

staff from across the ministry. In the case of this most recent audit, we've used over 70 staff from across the province—all the different regional staff from across the province, as well as the staff in our corporate office—to develop the action plan. Staff are involved in the development of the action plan. Then they are also part of implementing that action plan. We find that that works well.

So those would probably be the two biggest lessons learned: putting that action plan together with all the timelines and the commitments that you're going to do by that timeline, and basically having a lot of staff involved and taking ownership of the action items and taking responsibility for delivering on those action items as well. Again, in both cases—I mean, it is a very limited number of winter seasons or construction seasons where you can basically show progress in terms of meeting the Auditor General's recommendations.

Mr. Han Dong: Thank you very much. My colleagues on the opposite side have shown a particular interest in the Auditor General's findings following the 2014 whistle-blower allegation. I was reading from the briefing we received this morning from the Auditor General. In following that finding, she prescribed a recommendation, recommendation number 4: "To ensure that testing of asphalt quality is a constructive process and that information from whistle-blowers is adequately investigated, the Ministry of Transportation should ensure that controls and appropriate processes over asphalt samples are in place to prevent the risk of sample switching."

Can you provide the committee an update on the implementation of this recommendation?

Mr. Stephen Rhodes: Certainly I can. I certainly appreciate the—

Mr. Han Dong: And what's outstanding, and include the timeline.

Mr. Stephen Rhodes: Okay. I certainly appreciate the question and the concern from many of the committee members. We take the matter very seriously at the Ministry of Transportation. Obviously, we want to adhere to the highest standards of professionalism and conduct.

I can tell you today that we will be vigorously pursuing the 50 actions in the action plan. I've spoken to you a little bit about some of the specific actions that relate to this specific recommendation, in terms of bringing the custody of samples in-house, to the Ministry of Transportation, which is building on the pilot that Gerry referenced, which we started early in 2016. But we will certainly be moving it in-house on a go-forward basis. There will be additional and ongoing training of staff and contractors, and we have already established the dedicated phone line for any reporting of suspected inappropriate behaviour. We certainly will take those matters seriously. That's sort of where we stand on that one.

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Mr. Han Dong: Thank you very much. I heard that the ministry is suspending bonus payouts to asphalt quality. Can you explain that again?

Mr. Stephen Rhodes: Certainly. Kevin may assist me a little bit here, but there were some very good recom-

mendations from the Auditor General and her staff in the report. It spoke to the ongoing balance that we have in our contracts between incentives and penalties. In response to her office and her staff's suggestions to us, we have discontinued any incentive payments for asphalt mix properties—Kevin can talk a little bit about what that means—and compaction.

You may have also heard me or Kevin reference that we also use the opportunity to increase the standards that we want contractors to achieve on compaction and smoothness, and we have raised those, probably to some of the highest in North America.

We are continuing one incentive area which was related to smoothness, and that was from a perspective that our view is that it's going to give us a product that lasts longer, a product that is better for the environment. That's the reason we're keeping that one in place, but the other incentives have been discontinued, and the standard has been raised for a couple of other ones as well.

Mr. Han Dong: Kevin, do you have anything to add?

Mr. Kevin Bentley: I can add to that. As I mentioned before, the deputy mentioned compaction. Compaction is just, as probably everyone would understand, basically using rollers on the asphalt mat or the asphalt surface to make sure it's compacted. Again, that prevents rutting, potential potholing and so forth in the future.

Compaction is something where we've raised the requirement and eliminated the bonus, because with all the data that we do collect and with all of the samples that we do collect, both for what we call quality control testing and quality assurance testing, we have a lot of data on all these asphalt properties. We have raised the limit for compaction, because we feel that it is achievable by contractors based on the current practices and the current equipment available in terms of compaction.

Another asphalt property I briefly mentioned was gradation. Again, as you can appreciate, an asphalt mix is an appropriate blend of sand and gravel, and the binder, or the liquid asphalt cement. You have to have those in the right proportions. It is about 90% for a 5% aggregate, in terms of sand and gravel, and roughly 4% or 5% of that is asphalt cement. Again, the gradation is important. That's why, previously, we did have incentives around gradation both for sand and the gravel. Again, those incentives have been eliminated.

Another one is air voids. You can appreciate that if you have too much air, both in the mix that's being produced at the hot-mix plant or actually in the road, then those sand and stone particles may not be completely coated with that liquid, and then they may not bind properly. So we did have some incentives around basically keeping what we call "air voids" in the right range, but again, we've eliminated those bonuses.

The final bonus in those three was just the amount of asphalt cement in the mix.

The Chair (Mr. Ernie Hardeman): I'll have to stop you there and move on to the official opposition. Mr. Hillier.

Mr. Randy Hillier: Thank you, Chair. We'll go back for a couple of minutes and then I'll turn it over to Mr. Harris.

It is disturbing that we have a ministry that is engaged in significant activities and significant actions, and apparently it's not until the Auditor General's report comes out that things start happening—you know, the 50-point action plan. Although I welcome you taking action, I do have an expectation. I think most people in Ontario have an expectation that our senior management in our ministries don't need to have an Auditor General to explain how to do things well, and how to continue to improve things.

But I want to go to one statement that Mr. Bentley made during the questioning from Mr. Hatfield in the first round. It was in regard to premature cracking. You stated in your response that, in your examination of other neighbouring jurisdictions nobody else was experiencing premature cracking. That should ring alarm bells; it does with me. If all our other neighbouring jurisdictions aren't experiencing premature cracking, then what are we doing differently? What ought we be doing? I understand you're the chief engineer in the provincial highways division, so Mr. Bentley, if you can explain, what have you done with that information? Have you put together a thorough examination and analysis of what is being done differently here in Ontario that has led to premature cracking? And does the 50-point action plan address everything that you found in your examination?

Mr. Kevin Bentley: As I said, as the Auditor General noted in the timeline, the first instances of apparent premature cracking started back in the early 2000s. As I was mentioning before, with that jurisdictional scan, we were asking the question: Are other jurisdictions seeing the same thing? At the time, the answer was no. So we knew that, obviously, we had to determine the cause of that premature cracking.

As I mentioned earlier, there are various reasons why a pavement can crack, so you had to eliminate all of the potential—

Mr. Randy Hillier: That's what I want to know. In your examination, did you come up with a determinant of why Ontario has got premature cracking on our roads and highways, as compared—

Mr. Kevin Bentley: After all of the testing and the development of the tests, we believe it is the overuse of recycled engine oil bottoms, basically, that are being used to modify the asphalt cement liquid.

Mr. Randy Hillier: Okay. I'm going to leave it at that. I'm going to pass it over to Mr. Harris for a—

Mr. Michael Harris: Thanks, Mr. Hillier. I've asked about Highway 403. We had talked about a \$45-million repair budget, in 2007, to \$125 million. Yet in 2006, we did a \$23-million job on Highway 403 that was supposed to last until 2021. We paid an almost \$700,000 bonus. We've had to repair it twice at a cost of \$12.3 million. Why was that?

Mr. Stephen Rhodes: I have difficulty answering, "Why was it?" I know it's the reality. What I can say is,

we in the ministry certainly take very seriously that we need to have durable and well-built roads. This is not meeting that standard. Part of the things that are in the action plan are trying to avoid ever having these sorts of things that—

Mr. Michael Harris: Would nobody go back and ask, in 2008 and 2011—or even now, after the auditor brought this forward—"Hey guys, why did we spend \$12.3 million within a six-year time span?" when the highway should have lasted until 2021? Were those questions asked and what is the answer to spending \$12.3 million more than what we should have? We're here on behalf of taxpayers asking that question. We're hopeful that you can answer that.

Mr. Stephen Rhodes: I'm going to pass it to Kevin, but I would say, I think Kevin already alluded to a few of the things that are in the action plan that we hope will attend to some of this.

Kevin talked a little bit before about how the warranty structures were working. Certainly, we want to improve and enhance those. We also want to have a province-wide database on the warranties so that we can make sure that we're enforcing every aspect of them.

Mr. Michael Harris: Quick question: When you bring up warranties, what would the increase in cost or the percentage of costs in a contract be to cover a warranty, roughly? You've got a contract: 5% or 10% would cover off the warranty allocation for that, roughly?

Interjections.

Mr. Michael Harris: No idea. All right. So we have the recommendation. I don't have an answer, obviously, on why we spent \$12.3 million more specifically—

Mr. Stephen Rhodes: I was giving the answer but I didn't get to complete it.

Mr. Michael Harris: Go ahead. If you can tell me why we had to spend that, carry on. Sorry.

Mr. Stephen Rhodes: I can't tell you exactly why we had to spend it. I can tell you that I think part of the problem lies in the way our warranties were structured. Part of the problem lies in what Kevin referred to before, where some of our criteria were too subjective and not evidence-based enough. I think the pieces that we have in the action plan are going to try to address these sorts of things and ensure they do not happen again in the future—

Mr. Michael Harris: It's unfortunate. I think my colleague spoke of that, and we want to reinforce the fact that it shouldn't take an auditor's report in 2016—this \$12.3 million should jump out at folks to say, "There's clearly a problem here. The highway should have lasted until 2021. What's going on?"

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My next question is, there was a clause that was included in contracts that the ministry removed, and this was the ability to exclude litigious contractors from bidding on future projects. There was clearly no history of over-use of this clause. Why was that clause removed in 2015?

Mr. Stephen Rhodes: I'm not totally sure exactly why the clause was removed. I know that it had never been used. Certainly, that is something for the independent panel that we want to set up. We want to get their best advice as to whether it should be reinstated or not.

Mr. Michael Harris: Can anybody answer me as to why that clause was removed? Were there any discussions with the minister or the minister's staff regarding this particular clause? Was it a directive that was issued from the minister or the minister's office? Was there any discussion with the office of the minister on this particular removal of the clause, that you're aware of?

Mr. Stephen Rhodes: I started in February 2016, so it predates me. The only individual at this table who might have any insight on that would be Gerry.

Mr. Michael Harris: What do you think, Gerry?

Mr. Gerry Chaput: Just a point of clarification: The exclusion provision is not a clause in the contract. It is part of the pre-qualification process for our contractors, and it allows us to exclude contractors on a certain number of criteria. Having litigation against the crown is one of them.

As the deputy has mentioned, in the past we had that clause or that provision available to us since about 2006. In 2015, obviously, the landscape had changed. In other words, we had a tool in our toolbox that was not being used. It had an updated legal opinion, that we had received from our internal legal counsel, that the ability to actually use that clause for litigation could potentially run into a legal challenge. Therefore, the decision was made to take the clause out of the pre-qualification process.

Mr. Michael Harris: So they removed this clause that was not being exercised, from the contractors' perspective. You pulled it out, and now you're facing even more litigation. Is that correct?

Mr. Gerry Chaput: I can't comment on how much litigation we have today. I'm no longer at the ministry.

Mr. Michael Harris: I think it's quite a bit, from the report.

Nipigon bridge was in the report. It talked about the Nipigon bridge structure that was permitted to open when there were clear non-conformances outstanding. Why and how was that allowed to open when there were non-conformances outstanding? Why was that allowed to happen?

Mr. Stephen Rhodes: I can say that, certainly, safety is paramount. You may know that there's a range of work going on right now to not only ensure that the bridge is constructed, but that we have some permanent retrofits to make sure that the malfunction we had does not occur again and it continues to be safe.

Gerry may be in the best position to answer from previously. Certainly, we take the matter very seriously, and we're working very hard to ensure that the bridge is open and has all the necessary improvements made to it.

Mr. Michael Harris: I guess that's after the fact, but tell me why that bridge was allowed to open when there were non-conformances. I want to know who gave the

go-ahead to open that bridge, knowing there were non-conformances. Who would have authorized that?

Mr. Gerry Chaput: Can I ask a question? I'm not sure what non-conformance you're talking about.

Mr. Michael Harris: Well, there were non-conformances, were there not? I don't know if the auditor—do I have to ask—

Mr. Percy Hatfield: The bearings.

Mr. Randy Hillier: The bearings, but that was found out afterwards.

Mr. Gerry Chaput: The bridge was opened. It was in a safe condition when we opened it. Ontario is the only jurisdiction in North America that actually inspects its bridges every two years, by or under the direction of a professional engineer. The bridge was inspected prior to opening, and it was safe for operation.

Mr. Michael Harris: Was the bridge inspected by its own ministry officials or by a third party?

Mr. Gerry Chaput: Either our agents or the ministry officials on-site, and we had both on-site.

Mr. Michael Harris: Reports received at the time didn't indicate anything that we've now received after the fact?

Mr. Gerry Chaput: That's correct.

Mr. Michael Harris: By either party?

Mr. Gerry Chaput: That's correct.

Mr. Michael Harris: Was there ever any involvement by the minister's office or even another minister's office with regard to the opening of the bridge, any discussion as to the timing of when that bridge should open?

Mr. Gerry Chaput: The bridge is a signature project for northern Ontario. I don't recall whether there was a grand opening. Certainly, we would have notified the minister when it was opening because of the profile this bridge had in northern Ontario. It's a significant link for northern Ontario and a significant project to the people of the north. Therefore, it's traditional for us to often provide a news release or some information of when we open a structure of that size or that magnitude. Of our 1,700 contracts that we've put out over the last five years, do we do it on every one of them? No, but on major ones we do.

Mr. Michael Harris: Was the minister's office involved in—

The Chair (Mr. Ernie Hardeman): I would just caution the member: The questions are to the bureaucracy not to the minister's office, so if you would stay with—

Mr. Michael Harris: Well, the bureaucracy would have received a directive—

The Chair (Mr. Ernie Hardeman): —the point of the auditor's report.

Mr. Michael Harris: All right.

Mr. Randy Hillier: I think with the Nipigon bridge, it's a clear example—again, anybody in business, in management, would see, here we have a case where, after the fact, we find out that the bearings that were used were in non-conformance, that they were not up to the specifications that were contracted for by the MTO. They

were verified to be in conformance by the contractor's own engineering firm, but we found out later that was false.

Again, contracting and building—this is nothing new. We've been doing it for a long, long time. If we are to actually have, like the words that you used, robust checks and balances, it requires actual checks and balances. To have a contractor use his own consultant to verify the quality of the work is ludicrous. This has gone on for ages with the MTO and it's only now beginning to be seen, due to the Auditor General's report, that there may be some inappropriate actions with having non-independent verification. I don't know what—I shake my head, that those were the practices and procedures and the best policy guidelines by the MTO. We still don't have assurance how this independent verification will proceed with the MTO, even as of today, from what I'm hearing from you today.

Mr. Stephen Rhodes: We certainly have a plan forward to ensure that we have a solution that ensures that the malfunction does not happen again. The responsibility for the actions is something that is still trying to be determined. We will work our way through that and ensure that we learn from that process and certainly make any modifications to our processes to ensure that it doesn't happen again, for sure.

Mr. Randy Hillier: What is your plan going forward for independent verification of contractual conformance?

Mr. Stephen Rhodes: Your colleague from the NDP asked a similar question about QV engineers, and I think his suggestion was, have you thought about having—

Mr. Randy Hillier: I'm not asking for his suggestion. I want to know what the MTO is going to do.

Mr. Stephen Rhodes: I was just getting to how I answered him and what we're going to do. His suggestion was, should we have an independent pool of quality verification engineers, who, by the way, are also regulated by a professional association, and my answer back was, we have an independent panel that would be looking at these things. That is something that we absolutely want them to look at, and we certainly would consider it.

Mr. Randy Hillier: Now, will that independent panel include contractors who are doing business with the MTO?

Mr. Stephen Rhodes: No.

Mr. Randy Hillier: No.

Mr. Stephen Rhodes: We will make sure that the folks who are on there are knowledgeable in the area but do not have conflicts of interest.

Mr. Michael Harris: I've got one last question. The enhanced tension test and the extended aging test, both recommended by ministry engineers—why aren't those tests now being fully implemented? I guess they're not, and why are they not?

Mr. Stephen Rhodes: I think our action plan commits to fully implementing them.

Mr. Michael Harris: They're now fully—

Mr. Stephen Rhodes: When the audit team arrived, we had them in a pilot stage, and we subsequently have expanded it out fully.

Mr. Michael Harris: So both tests are now being fully implemented on all contracts going forward?

Mr. Stephen Rhodes: On a go-forward basis, correct.

The Chair (Mr. Ernie Hardeman): That's a great place to say thank you very much for your presentation this afternoon. That does conclude all the time—

Mr. Percy Hatfield: What about me? Don't I get another question?

The Chair (Mr. Ernie Hardeman): All the time that's available for questions—

Mr. Randy Hillier: There's another five minutes on the clock.

The Chair (Mr. Ernie Hardeman): No, that was because the third party gave up five minutes.

Mr. Randy Hillier: He gave it to us.

The Chair (Mr. Ernie Hardeman): No, sir.

Mr. Michael Harris: He put it back in the pool.

The Chair (Mr. Ernie Hardeman): I just want to point out that the timetable is not a buffet. Everybody is entitled to their fair share, and I think we've accomplished that.

We want to thank you again very much for coming in this afternoon to present to the committee, to help in their deliberations as we write the report. Thank you.

I would just ask the committee to—we'll just break for a few minutes while we vacate the room. We'll go into an in camera meeting to decide where we'll go with report writing.

The committee continued in closed session at 1441.

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